Missouri Weekly Influenza Surveillance Report
2017-2018 Influenza Season[1]

Week 41: October 8 – 14, 2017

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri is Sporadic[2].

- During Week 41, a total of 69 laboratory-positive[3] influenza cases (46 influenza A and 23 influenza B) were reported. A season-to-date total of 151 laboratory-positive influenza cases (112 influenza A, 38 influenza B, and one untyped) have been reported in Missouri as of Week 41. The influenza type for reported season-to-date cases includes 74% influenza A, 25% influenza B, and 1% untyped. No laboratory-positive cases of influenza were reported by the Missouri State Public Health Laboratory (MSPHL) during Week 41.

- Influenza-like illness (ILI) activity was below baseline for the Missouri Outpatient ILI Surveillance Network (ILINet). The reported percentage of outpatient visits for ILI was 0.68% (Figure 5).[4] The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was low during Week 41 (Figure 6). The ILI data from ESSENCE is currently not available due to system upgrades. The data and subsequent analysis will be included in future reports as available.

- One influenza-associated death has been reported in Missouri as of Week 41.[5] During Week 40, 32 deaths involving Pneumonia and Influenza (P&I) were reported to the Bureau of Vital Records, resulting in a season-to-date total of 32 P&I-associated deaths in Missouri.[6]

- No influenza or ILI-associated outbreaks or school closures have been reported in Missouri as of Week 41.

- Influenza activity was low in the U.S. during Week 40. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2017-2018 influenza season begins CDC Week 40 (week ending October 7, 2017) and ends CDC Week 39 (week ending September 29, 2018).

[2]Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of influenza-like illness.

[3]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[4]Influenza-like illness (ILI) is defined by ILINet as fever (temperature of $100^{\circ}F$ [$37.8^{\circ}C$] or greater) and a cough and/or a sore throat without a known cause other than influenza. Influenza-like illness (ILI) is defined by ESSENCE as Emergency Department chief complaints that contain keywords such as "flu", "flulike", "influenza" or "fever" plus "cough" or "fever" plus "sore throat".

[5]All influenza-associated deaths became reportable in Missouri in 2016.

[6]The P&I data are available one week later. The P&I data for the CDC Week provided is the most current data available.

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at http://arcg.is/C5zy1. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 40**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 40**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Week 41 (October 8 – 14, 2017)[*]

Influenza Type	Week 40	Week 41	2017-2018[*] Season-to-Date
Influenza A	66	46	112
Influenza B	15	23	38
Influenza Unknown Or Untyped	1	0	1
Total	82	69	151

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season begins week ending October 7, 2017 (CDC Week 40). Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 41 (October 8 – 14, 2017)[*‡]

Age Group	Week 41 Cases	Week 41 Rate[‡]	2017-2018[*] Season-to-Date	2017-2018[*] Season-to-Date Rate[‡]
00-04	14	3.74	26	6.95
05-24	17	1.06	38	2.37
25-49	21	1.10	39	2.04
50-64	7	0.57	15	1.21
65+	10	1.05	33	3.46
Total	69	1.13	151	2.48

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season begins week ending October 7, 2017 (CDC Week 40). Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 41 (October 8 – 14, 2017)[*‡]

District	Week 41 Cases	Week 41 Rate[‡]	2017-2018* Season-to-Date	2017-2018* Season-to-Date Rate[‡]
Central	4	0.59	11	1.62
Eastern	32	1.41	71	3.13
Northwest	15	0.94	24	1.50
Southeast	13	2.76	34	7.21
Southwest	5	0.47	11	1.03
Total	69	1.13	151	2.48

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season begins week ending October 7, 2017 (CDC Week 40). Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2014-2018[*]
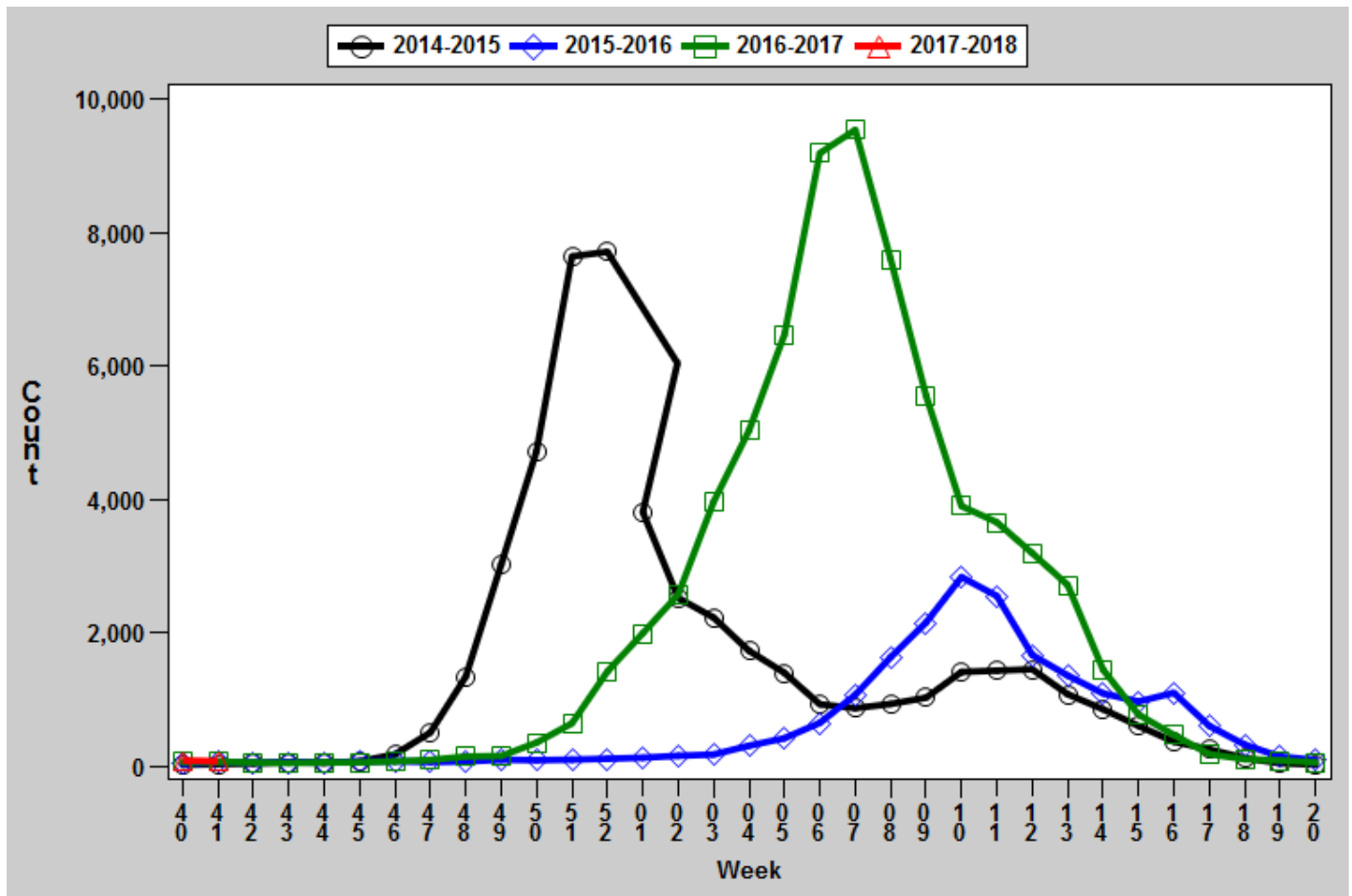
[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*2017-2018 season-to-date through the week ending May 19, 2018 (Week 20). The 2014-2015 season had 53 weeks rather than the usual 52. During Week 53 of the 2014-2015 influenza season, 3,082 laboratory-positive cases were reported. Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 5. Percentage of Outpatient Visits for Influenza-like Illness (ILI), Missouri Outpatient ILI Surveillance Network (ILINet) 2014-2018[*†]
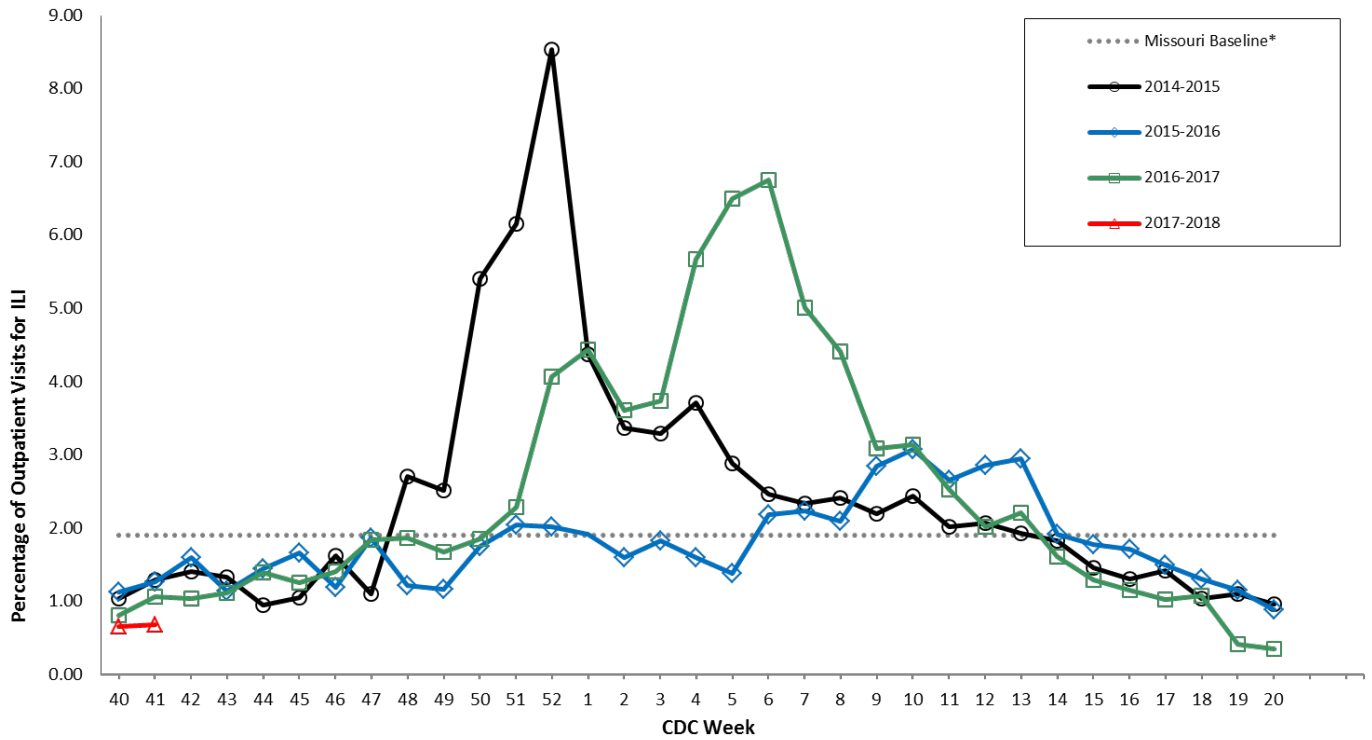

*The ILINet Region 7 (MO, IA, KS, NE) baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons, plus two standard deviations. A non-influenza week is defined as periods of two or more consecutive weeks in which each week accounted for less than 2% of the season's total number of specimens that tested positive for influenza.
Data Source: U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Centers for Disease Control and Prevention (CDC).

[†]2017-2018 season-to-date through the week ending May 19, 2018 (Week 20). The 2014-2015 season had 53 weeks rather than the usual 52. The percentage of outpatient visits for ILI during Week 53 was 7.63.

Figure 6. Season-to-Date PCR (+) Tests for Influenza in Missouri
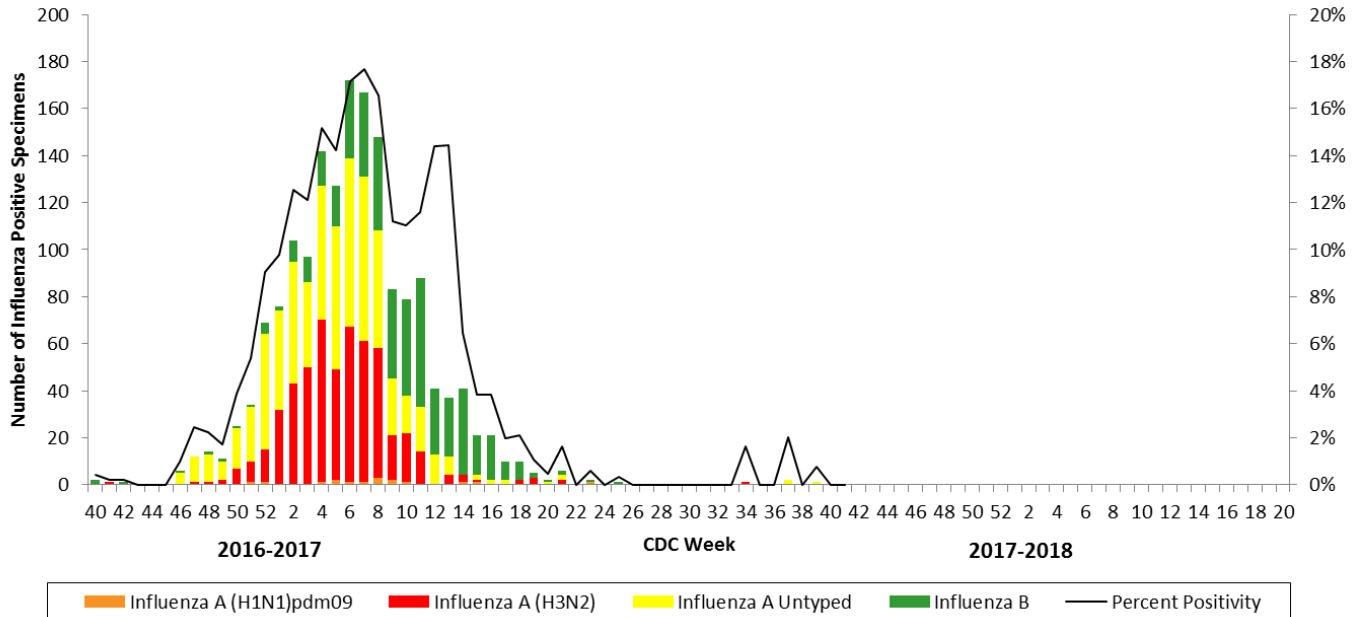
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2016-2017 season-to-date through the week ending May 19, 2018 (Week 20).

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/